

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-11. (Canceled)

Claim 12. (Currently Amended) An isolated, enriched, or purified PTP04 polypeptide, wherein said polypeptide comprises:

- (a) an amino acid sequence comprising at least 90% identity to the full length amino acid sequence set forth in SEQ ID NO: 2;
- (b) an amino acid sequence comprising at least 90% identity to the ~~full~~ length amino acid sequence ~~of the sequence~~ set forth in SEQ ID NO: 2, except that it lacks amino acid residues 1-48, ~~49-294~~ or 295-807 of SEQ ID NO: 2;
- (c) an amino acid sequence comprising at least 90% identity to the amino acid sequence set forth in amino acid residues 1-48, 49-294, or 295-807 of SEQ ID NO: 2; or
- (d) an amino acid sequence comprising at least 90% identity to the full length amino acid sequence set forth in SEQ ID NO: 2 except that it lacks an N-terminal domain or a C-terminal domain,

wherein said polypeptide possesses an enzymatic activity of a tyrosine phosphatase.

Claims 13-22. (Canceled)

Claim 23. (Previously Presented) The polypeptide of claim 12, wherein said polypeptide comprises an amino acid sequence comprising at least 95% identity to the full length amino acid sequence set forth in SEQ ID NO: 2.

Claim 24. (Previously Presented) The polypeptide of claim 12 wherein said polypeptide comprises the full length amino acid sequence set forth in SEQ ID NO: 2.

- Claim 25. (Previously Presented) The polypeptide of claim 12, wherein said polypeptide comprises an amino acid sequence comprising at least 95% identity to the amino acid sequence set forth in amino acid residues 1 – 48, 49 – 294 or 295 – 807 of SEQ ID NO: 2.
- Claim 26. (Previously Presented) The polypeptide of claim 12, wherein said polypeptide comprises the amino acid sequence set forth in amino acid residues 1 – 48, 49 – 294 or 295 – 807 of SEQ ID NO: 2.
- Claim 27. (Previously Presented) The polypeptide of claim 12 wherein polypeptide comprises an amino acid sequence comprising at least 95% identity to the full length amino acid sequence set forth in SEQ ID NO: 2 except it lacks amino acid residues 1-48 or 295-807 of SEQ ID NO: 2.
- Claim 28. (Previously Presented) The polypeptide of claim 12 wherein polypeptide comprises the full length amino acid sequence set forth in SEQ ID NO: 2 except it lacks amino acid residues 1-48 or 295-807 of SEQ ID NO:2.
- Claim 29. (Previously Presented) The polypeptide of claim 12 wherein polypeptide comprises an amino acid sequence comprising at least 95% identity to the full length amino acid sequence set forth in SEQ ID NO: 2 except it lacks an N-terminal domain or a C-terminal domain.
- Claim 30. (Previously Presented) The polypeptide of claim 12 wherein polypeptide comprises the full length amino acid sequence set forth in SEQ ID NO: 2 except it lacks an N-terminal domain or a C-terminal domain.
- Claim 31. (Previously Presented) An isolated, enriched or purified polypeptide comprising the polypeptide of claim 12 fused to non-PTP04 polypeptide.
- Claim 32. (Currently Amended) An isolated, enriched or purified polypeptide comprising the amino acid sequence of SEQ ID NO: 15, 16 or 17, wherein said polypeptide possesses an enzymatic activity of a tyrosine phosphatase.

- Claim 33. (Previously Presented) A pharmaceutical composition comprising the polypeptide of claim 12.
- Claim 34. (Currently Amended) The isolated, enriched or purified polypeptide of claim ~~[[33]]~~ 31, wherein said non-PTP04 polypeptide is hemagglutinin or GST.